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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/581,478	06/14/2000	YOSHIYUKI SAKAKI	1241.14	2675

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01/03/2002

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NEW YORK, NY 10112-3801

EXAMINER

ARTHUR, LISA BENNETT

ART UNIT	PAPER NUMBER
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1655

DATE MAILED: 01/03/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/581,478

Applicant(s)

SAKAKI, YOSHIYUKI

Examiner

Lisa B. Arthur

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 1,8-19 and 22-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 2-7,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: sequence alignment.

1. This action is in response to the paper filed October 24, 2001. Currently, claims 1-38 are pending in this application but claims 1,8-19, 22-38 have been withdrawn from consideration by restriction requirement made in the October 3, 2001 office action. This action contains an examination of elected claims 2-7 ,20 and 21.

2. Applicant's election without traverse of Group I, claims 2-7, 20 and 21 in Paper No. 7 is acknowledged.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2-7, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Kitamura et al. (Biochem. Biophys. Res. Commun. 219:509-514 (1996)). Kitamura et al. teach a DNA encoding a protein which is 99.4% similar in amino acid sequence to the amino acid sequence of SEQ ID NO 2 (see attached sequence alignment- Attachment A). Kitamura et al. teach that his DNA was isolated from rat brain tissue. The coding sequence is of identical length, i.e. 1128 amino acids, and is different at only 6 amino acids, 5 of which are conservative amino acid differences. Consequently, Kitamura et al. teach a DNA encoding a protein which includes a substitution, deletion and/or addition of one or more amino acids represented by SEQ ID NO 2. Even though Kitamura et al do not teach that the encoded protein has

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apoptosis suppressing activities, because the amino acid sequence is almost identical to the sequence of SEQ ID NO 2, the encoded protein of Kitamura et al. is presumed to have the same function. Furthermore, the DNA of Kitamura et al. anticipates the DNA of claim 4 because due to the very high degree of sequence similarity, the DNA of Kitamura et al. would hybridize to Dna encoding SEQ ID NO 2 or to SEQ ID NO 1 under high stringency conditions. Attachment B shows the alignment of SEQ ID NO 1 with the nucleotide sequence of Kitamura et al. This alignment shows that the Dna of Kitamura et al. is 68% similar over all with regions of 91% similarity. This degree of similarity is sufficient to support hybridization of the two sequences under "high stringency conditions".

5. Claims 2-7, 20 and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Baumgartener et al. (J. MOL. BIOL. 251:41-49 (1995)). Baumgartener et al. teach a DNA encoding a protein which is 99.4% similar in amino acid sequence to the amino acid sequence of SEQ ID NO 2 (see attached sequence alignment- Attachment A). Baumgartener et al. teach that this protein is part of a family of proteins, the HEM proteins, that are tissue specific transmembrane proteins expressed in invertebrates through mammals and which are essential in oogenesis. Baumgartener et al. teach that this DNA was isolated from rat brain tissue. The coding sequence is of identical length, i.e. 1128 amino acids, and is different at only 6 amino acids, 5 of which are conservative amino acid differences. Consequently, Baumgartener et al. teach a DNA encoding a protein which includes a substitution,

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deletion and/or addition of one or more amino acids represented by SEQ ID NO 2.

Even though Baumgartener et al do not teach that the encoded protein has apoptosis suppressing activities, the encoded protein of Baumgartener et al. is presumed to have the same function because the amino acid sequence is almost identical to the sequence of SEQ ID NO 2. Furthermore, the DNA of Baumgartener et al. anticipates the DNA of claim 4 because, due to the very high degree of sequence similarity, the DNA of Baumgartener et al. is capable of hybridizing to DNA encoding SEQ ID NO 2 or to SEQ ID NO 1 under high stringency conditions. See attachment C for the alignment of SEQ ID no1 with the nucleotide sequence of Baumgartener et al.

6. No claims are allowable over the prior art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa B. Arthur whose telephone number is 308-3988. The examiner can normally be reached on Monday-Wednesday from 7:00 am to 2:30 pm.

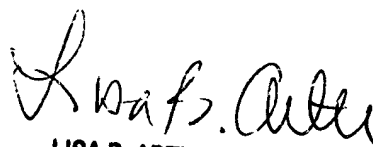
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (703) 308-1152. The fax phone number for the organization where this application or proceeding is assigned is 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0196.

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A handwritten signature in black ink, appearing to read "Lisa B. Arthur". The signature is fluid and cursive, with the first name "Lisa" and last name "Arthur" clearly distinguishable.

LISA B. ARTHUR
PRIMARY EXAMINER
GROUP 1800-1600
December 31, 2001